

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A system for recording and presenting electrophysiological data, comprising:

an implantable cardiac device having a first sensing channel for sensing cardiac electrical activity and generating electrogram signals;

wherein a controller of the implantable cardiac device is programmed to:

record electrograms over a specified long-term period of time,

generate representative electrograms for each of a plurality of ~~short-term~~ discrete time intervals within the specified long-term period of time, and

compute the representative electrogram for ~~a particular short-term time interval from one or more electrograms recorded during the particular short-term time interval~~ each discrete time interval as a time average of electrograms recorded during the discrete time interval only when the patient's heart rate is within a specified range; and,

an external programmer configured to download representative electrograms from the implantable device and display an aggregate of representative electrograms in graphical form as indexed by ~~the plurality of short-term time intervals~~ time.

2-3. (Cancelled)

4. (Original) The system of claim 1 wherein the representative electrograms are intrinsic electrograms.

5. (Original) The system of claim 1 wherein the representative electrograms are evoked response electrograms.

6. (Cancelled)

7. (Original) The system of claim 1 wherein the representative electrograms are displayed on a display screen of the external programmer.

8. (Original) The system of claim 1 wherein each of the representative electrograms is displayed as a graph of the electrogram's magnitude with a shading or color of the graph identifying the defined time period represented by the representative electrogram.

9. (Currently Amended) The system of claim 1 wherein the controller is programmed to continuously generate representative electrograms for consecutive defined-time periods discrete time intervals within the long-term period of time.

10. (Original) The system of claim 9 wherein the controller is programmed to maintain a specified number of representative electrograms in memory with the oldest representative electrogram being discarded.

11. (Currently Amended) A system for recording and presenting electrophysiological data, comprising:

an implantable cardiac device having a first sensing channel for sensing cardiac electrical activity and generating electrogram signals;

wherein a controller of the implantable cardiac device is programmed to:

record electrograms over a specified long-term period of time,

generate representative electrograms for each of a plurality of heart rate ranges during the specified long-term period of time by computing each representative electrogram for a particular heart rate range as a time average of a plurality of electrograms recorded when a patient's heart rate is within the particular heart rate range, and

compute the representative electrogram for a particular heart rate range from one or more electrograms recorded only when the patient's heart rate is within the particular heart rate range; and,

an external programmer configured to download representative electrograms from the implantable device and display an aggregate of representative electrograms in graphical form as indexed by the plurality of heart rate ranges.

12-13. (Cancelled)

14. (Original) The system of claim 11 wherein the representative electrograms are intrinsic electrograms.

15. (Original) The system of claim 11 wherein the representative electrograms are evoked response electrograms and wherein heart rate refers to pacing rate.

16. (Original) The system of claim 11 wherein the representative electrograms are displayed on a display screen of the external programmer.

17. (Original) The system of claim 11 wherein each of the representative electrograms are displayed as a graph of magnitude versus time or sample number with a shading or color of the graph identifying the defined heart rate range represented by the representative electrogram.